Amendments to the Claims

The following listing of claims will replace all prior versions of claims in the application.

1. (Original) A method for producing a semiconductor chip, comprising:

applying a photothermal conversion layer comprising a light-absorbing agent and a heat decomposable resin on a light-transmitting support, provided that upon irradiation of radiation energy, said photothermal conversion layer converts the radiation energy into heat and decomposes due to the heat,

preparing a semiconductor wafer having a circuit face with a circuit pattern and a non-circuit face on the side opposite said circuit face, laminating said semiconductor wafer and said light-transmitting support through a photocurable adhesive by placing said circuit face and said photothermal conversion layer to face each other, and irradiating light from said light-transmitting support side to cure the photocurable adhesive layer, thereby forming a laminated body having a non-circuit face on the outside surface,

grinding the non-circuit face of said semiconductor wafer until said semiconductor wafer reaches a desired thickness,

dicing the ground semiconductor wafer from the non-circuit face side to cut it into a plurality of semiconductor chips,

irradiating radiation energy from said light-transmitting support side to decompose said photothermal conversion layer, thereby causing separation into semiconductor chips having said adhesive layer and a light-transmitting support, and optionally

removing said adhesive layer from said semiconductor chips.

2. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein a die bonding tape is affixed to the semiconductor wafer before dicing the ground semiconductor wafer.

3. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein said photothermal conversion layer contains carbon black, and/or a transparent filler.

4. (Previously presented) The method for producing a semiconductor chip of claim 2, wherein said photothermal conversion layer contains carbon black, and/or a transparent filler.

5. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein laminating said semiconductor wafer and said light-transmitting support through a photocurable adhesive is performed in a vacuum.

6. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein said semiconductor wafer is ground to a thickness of 50 μm or less.

7. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein said photocurable adhesive layer has a storage modulus of 5×10^8 Pa or more after curing.

8. (Previously presented) The method of claim 1, wherein dicing is performed while recognizing scribe lines, and with alignment via light capable of passing through a) the light-transmitting support and photothermal conversion layer from said light-transmitting support side or b) the semiconductor wafer from the non-circuit side.

9. (Previously presented) The method for producing a semiconductor chip claim 3, wherein laminating said semiconductor wafer and said light-transmitting support through a photocurable adhesive is performed in a vacuum.

10. (Previously presented) The method for producing a semiconductor chip claim 4, wherein laminating said semiconductor wafer and said light-transmitting support through a photocurable adhesive is performed in a vacuum.

11. (Previously presented) The method for producing a semiconductor chip of claim 3, wherein said semiconductor wafer is ground to a thickness of 50 μm or less.

12. (Previously presented) The method for producing a semiconductor chip of claim 4, wherein said semiconductor wafer is ground to a thickness of 50 μm or less.

13. (Previously presented) The method for producing a semiconductor chip of claim 3, wherein said photocurable adhesive layer has a storage modulus of 5×10^8 Pa or more after curing.

14. (Previously presented) The method for producing a semiconductor chip of claim 4, wherein said photocurable adhesive layer has a storage modulus of 5×10^8 Pa or more after curing.

15. (Previously presented) The method of claim 2, wherein dicing is performed while recognizing scribe lines, and with alignment via light capable of passing through a) the light-transmitting support and photothermal conversion layer from said light-transmitting support side or b) the semiconductor wafer from the non-circuit side.

16. (Previously presented) The method of claim 3, wherein dicing is performed while recognizing scribe lines, and with alignment via light capable of passing through a) the light-transmitting support and photothermal conversion layer from said light-transmitting support side or b) the semiconductor wafer from the non-circuit side.

17. (Previously presented) The method of claim 4, wherein dicing is performed while recognizing scribe lines, and with alignment via light capable of passing through a) the light-transmitting support and photothermal conversion layer from said light-transmitting support side or b) the semiconductor wafer from the non-circuit side.

18. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein a die bonding tape is affixed to the semiconductor wafer before dicing the ground semiconductor wafer, wherein said semiconductor wafer is ground to a thickness of 50 μm or less.

19. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein a die bonding tape is affixed to the semiconductor wafer before dicing the ground semiconductor wafer, wherein said semiconductor wafer is ground to a thickness of 50 μm or less, and wherein said photocurable adhesive layer has a storage modulus of 5×10^8 Pa or more after curing.

20. (Previously presented) The method for producing a semiconductor chip of claim 1, wherein a die bonding tape is affixed to the semiconductor wafer before dicing the ground semiconductor wafer, wherein said semiconductor wafer is ground to a thickness of 50 μm or less, and wherein dicing is performed while recognizing scribe lines along with alignment via light capable of passing through a) the light-transmitting support and photothermal conversion layer from said light-transmitting support side or b) the semiconductor wafer from the non-circuit side.